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ABSTRACT

The goal of Queensborough Community College's College Discovery Pre-Freshman Summer Program (PFSP) is to ease the transition from high school into college for entering College Discovery freshmen, and thereby improve their academic performance and increase their chances for retention at the college. An evaluation of the PFSP was conducted in 1987 assessing the summative longitudinal academic performance of the 1985 and 1986 PFSP groups in comparison to a control group of College Discovery students who did not participate in the PFSP program. Findings showed that after four semesters, the 1985 PFSP group, on the average, had a grade point average about 0.35 of a point higher than the control group, and had a retention rate of almost 71% compared to 35% for the control group. The 1986 PFSP group tended to score between the control group and the 1985 PFSP group, with none of the comparisons between the 1986 PFSP and control group reaching statistical significance. Predictors of fourth semester academic performance for the 1985 PFSP group included gender, college information, information-seeking behavior, reading assessment score gains, and college social relationships. Gains analysis is offered on the 1987 group for the 6-week summer program. Supporting tables and figures comprise about half the document. (EJV)

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QUEENSBOROUGH COMMUNITY COLLEGE OF

THE CITY UNIVERSITY OF NEW YORK

COLLEGE DISCOVERY PRE-FRESHMAN SUMMER PROGRAM: LONGITUDINAL ACADEMIC OUTCOMES FOR 1985 AND 1986 AND PROGRAM DATA FOR 1987

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August 1987

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Abstract

The current College Discovery Pre-Freshman Summer Program (PFSP) evaluation focuses primarily upon summative longitudinal academic performance of the 1985 and 1986 PFSP groups in comparison to a control group of College Discovery students who did not participate in the PFSP program.

Groups were equated on seven input variables: age gender, high school admissions average, high school units, and initial CUNY Assessment scores in reading, writing and mathematics. Comparisons were made between groups on 18 variables. Findings showed that after four semesters, the 1985 PFSP group, on the average, had a GPI of about 0.35 of a point higher than the control group. Retention of the 1985 PFSP group was almost 71% vs. 35% for controls. The 1985 PFSP had satisfactorily completed (SCRCMPL) 8 more credits than controls after four semesters, had almost 24 more quality progress points (GPI x SCRCMPL) than controls, was enrolled 0.63 more semesters than controls and showed a rate of progress of 0.66 more credits satisfactorily completed per semester enrolled than controls.

The 1986 PFSP group tended to score between the control group and the 1985 PFSP group, with none of the comparisons

between the 1986 PFSP group and controls reaching statistical significance ($p < .10$). Predictors of fourth semester academic performance for the 1985 PFSP group included: gender (females performing academically better than males in the PFSP group), college information, information seeking behavior, CUNY Reading Assessment score gains during the six-week program, and college social relationships.

CUNY Assessment gains analyses for the 1987 program are presented, showing significant gains in reading and writing, together with comparisons of gains observed in previous years' programs. A potential predictor of later academic performance: Antonovsky's Sense of Coherence (1979, 1987) is explored in predicting CUNY Assessment gains.

Finally, an examination of one semesters' academic performance of the 1987 PFSP group vs. controls will be provided in an addendum, after the fall 1987 semester is concluded.

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The author wishes to express his thanks to Dr. Michael Elkin, director of the 1987 College Discovery Pre-Freshman Summer Program, for his continued assistance; to Carlos Heredia, program counselor, for his help in collecting data with the Life Situation Questionnaire (Antonovsky, 1987); to Dr. Robert Fredericks, for providing student data from the California Achievement Tests (Tiegs & Clark, 1970) on reading performance; to Mildred Kallman and her staff in the Office of Testing and Institutional Research, for assisting in the collection and scoring of the post-test CUNY Assessment Test data; and to Dean Vita Tauss, College Discovery administrator and Dean of Instructional Services, for her support and encouragement to do a long-range longitudinal study of the Pre-Freshman Summer Program groups as they moved through semesters at Queensborough Community College.

College Discovery Pre-Freshman Summer Program: Longitudinal Academic Outcomes for 1985 and 1986 and Program Data for 1987

I. Introduction

The goal of the Queensborough Community College College Discovery Pre-Freshman Summer Program (PFSP) during the program years of 1985 - 1987 has been to ease the transition from high school into college for entering College Discovery freshmen in order to improve their academic performance and increase their chances for retention at the college (Miller, 1985, p.5). "The PFSP attempts to integrate instructional, tutorial, vocational, and counseling activities so as to quickly foster individual student development and personal enrichment. Further, the PFSP attempts to improve academic persistence and success for those who participate (DeFazio, 1986, p. 1)."

Program objectives for the 1985 and 1986 cycles included:

1. To improve the student participants' basic skills in reading, writing, and/or mathematics.

2. To strengthen students' identification with their cohort group and the general college community.

3. To make the students' attitudes towards career objectives realistic and introduce them to viable alternatives.

4. To make the students more self-aware and increase the level and type of interpersonal skills.

5. To increase the students' knowledge of the college organization, resources and activities available them (DeFazio, 1986, p.1).

Program Structure

The PFSP ran for six weeks from June through August in 1985, 1986 and 1987. Each day included a 65 minute instructional period (1985) or 90 minute instructional period (1986) in each of two basic skills areas drawn from reading, writing or mathematics, depending upon student need. In 1985 there were no tutorial periods, in 1986 students attended a one-hour tutorial period twice a week immediately following the instructional segment. Each day, students were scheduled to attend counseling workshops focusing on orientation to the college and its resources, career exploration, study skills (1986 only), group dynamics

and group project (1985 only). Individual counseling sessions were scheduled as part of the program.

The program structure of the 1987 program was designed to implement a somewhat different philosophical and goal orientation (Elkin, 1987). The emphasis in the 1987 program was on the concept of building college survival and coping skills through an integrating project: developing and writing a career development research paper. Students were directed in their basic skills instructional periods of 70 minutes in each of two of the three areas of reading, writing, or mathematics to apply what they were learning to their projects. In addition to the basic skills areas, students spent three hours a week in the library under the guidance of a project mentor, a basic skills instructor, as they did their research, one hour a week in the Instructional Resource Center, one hour a week in a workshop for implementation of career plans, one hour a week in a group dynamics workshop and one hour a week discussing and implementing college survival strategies. Individual counseling sessions were also scheduled. Thus, the approach to the 1987 program was that of providing a hands-on experience of working on a meaningful project designed to build basic skills competencies, career decision making, organizational skills, and strengthen analysis and synthesis

in an integrated, realistic and meaningful manner so as to motivate learning the basic skills components through their application in carrying out a complex, realistic academic task.

Focus of this Report

Previous evaluation reports of the Queensborough Community College College Discovery Pre-Freshman Summer Program addressed the issue of short-range, immediate program process goal attainment: positive growth in basic skills as measured by the CUNY Assessment tests and in inventories measuring gains in career development, personal and social attitudes, and information about the college at the conclusion of the six-week program was observed and reported (DeFazio, 1986; Miller, 1985).

Rather than repeat this type of study a third time, the present evaluation report will concentrate instead on long-range, summative outcomes, examining the major goals of the CD-PFSP program: academic performance and persistence viewed from the perspective of up to four semesters' attendance at the college. Because of limitations of time, there will be little or no evaluation of the short-range outcomes of the 1987 program, except in CUNY Assessment skills gains and a comparison of academic program inputs of

the 1987 group with those of the 1985 and 1986 groups. Since the "proof of the pudding is in the eating," we ask here: 1)To what extent did participation in the CD-PFSP make a significant difference in academic performance outcomes after several semesters' attendance at Queensborough as compared with a College Discovery control group which did not participate in the PFSP? (2)If there are any gains observed, are they constant over time, do they fade after a period of attendance at the college, or do they become more pronounced?

Design of the Report

The report will first provide data on program inputs for each program year, as well as for the control group, in order to examine the equivalence of the groups, then consider in detail the academic performance of both the 1985 and 1986 PFSP groups in comparison to the control group for up to four semesters' attendance (1985 PFSP group) and up to two semesters' attendance (1986 PFSP group). Some comparisons of the two PFSP groups (1985 vs. 1986) will be given. Some suggestive predictors of academic outcomes after four semesters' attendance in the 1985 group will be reported. A potentially useful predictor, used in the 1987 PFSP group, will be described and related to program gains

and performance during the Summer 1987 program. Finally, the CUNY Assessment gains data for the 1987 program will be presented, and conclusions and recommendations will be made.

At the end of the 1987 PFSP group's first semester of attendance, fall 1987, a comparison of academic outcomes of the 1987 program group and the control group of non-program College Discovery freshmen will be provided in an addendum.

II. Academic Input Data: 1985 - 87

Participants

The participants included in the study consisted of four groups: the 17 students enrolled in the 1985 PFSP program and who enrolled in the college in fall 1985, a control group of 17 students drawn at random from the College Discovery (CD) roster of new freshmen entering the college in the fall of 1985 who did not participate in the program, the 14 students who enrolled in the 1986 PFSP program and who enrolled in the college in fall 1986, and the 14 students enrolled in the current 1987 PFSP program.

The three PFSP groups and the control group were compared on the following seven input variables:

Age

Gender

High School Admissions Average

High School Units

CUNY Reading Pre-Test

CUNY Writing Pre-Test

CUNY Mathematics Pre-Test

Table 1 presents the means and standard deviations of these seven program input variables and the probability levels of two-tailed Mann-Whitney ranks tests of comparisons between each PFSP group and the control group. In addition, Kruskal-Wallis Non-Parametric ANOVA tests of ranks for the four groups are provided for each input variable.

Insert Table 1 about here

The reader can see that experimental and control groups for each of the years were roughly comparable on all input variables. Although not statistically significant, the 1987 PFSP group had the highest mean high school admissions average and CUNY Assessment writing scores, but lowest mean CUNY mathematics assessment scores. The 1985 PFSP group had the highest mean age and highest percentage of female

students. The 1986 PFSP group had the highest mean CUNY Assessment mathematics scores and the control group had the highest mean number of high school units and CUNY Assessment reading scores. Clearly, no one group led the others on a majority of the seven variables, even at non-significant levels. Chi-square analysis of students' ethnicity in the 1985, 86 and 87 groups showed no significant differences in distributions by year (chi-square = 16.48, p = .170, df = 12). The distributions by year appear in table 2.

Insert Table 2 about here

III. Academic Performance Outcomes: 1985 and 1986 Groups

Academic Performance Variables

For each semesters' attendance, i.e., four semesters for the 1985 PFSP and two semesters for the 1986 PFSP, the following 18 measures of academic performance were either taken directly from students' academic college records or derived from them:

1. Grade Point Index (GPI): cumulative average of all academic work completed at the college to date.

2. Credits Satisfactorily Completed (CRSCMPL): credits completed with grades of D- or more.

3. Qualitative Progress (QUALPRG): GPI x CRSCMPL, a measure similar to quality points, but one which uses satisfactorily completed credits rather than attempted credits in the product, thus used to show both the amount and quality of the work completed.

4. Retention (RETN): the number of students who enrolled during a semester / the total number of students who enrolled during the first semester of college. This statistic is expressed as a percentage.

5. Semesters Enrolled (SEMENRL): the number of semesters a student actually registered for courses and remained beyond the third week of the semester, thus showing courses on his or her transcript.

6. Rate of Progress (RATEPRG): CRSCMPL / SEMENRL, a measure of the average number of credits completed satisfactorily per semester of enrollment.

7. Semesters Completed (SEMCMPL): the number of semesters in which the student obtained at least one grade different from "W" or "WU."

8. Probation Semesters (PROB): the number of semesters on probation.

9. Dismissal Semesters (DISML): the number of semesters on academic dismissal.

10. Grades of "W" (W): the total number of "W" grades on the transcript.

11. Grades of "WU" (WU): the total number of grades of "WU" on the transcript.

12. Withdrawals (WITHDRW): the sum of W + WU grades on the transcript.

13. Grades of B - A (GRADEBA): the total number of grades in the range of B through A. Only B, B+, A- and A are included.

14. Grades of "FIN" and "FAB" (FINFAB): the total number of INC (Incomplete) and ABS (Absent from final examination) grades which have become FIN (Incomplete, failing) or FAB (Absent, failing) due to not completing course requirements.

15. Academic Difficulty (ACADIFF): the sum of PROB + DISML, i. e., the sum of the number of semesters on probation or on academic dismissal.

16. Grades of "F" (F): the total number of grades of "F" on the transcript.

17. Remedial Percent "R" Grades (REMPCTR): the percentage of "R" grades as compared to all remedial course grades in basic skills reading, writing and mathematics courses, no matter how many times repeated. The four-week freshman seminar orientation course (STX-100) grade was excluded from this computation, as it is not a remedial basic skills course.

18. Poor Grades (POORGRD): the sum of grades of F + WU + REMPCTR + FINFAB.

Analysis

The 18 academic performance variables were obtained from student records and calculated, where necessary, from these data. Means and standard deviations for each PFSP (1985 and 86) and the control group were computed to provide a description of these groups for each observed variable, except retention, a global group variable. However, because

of the small sizes of the groups and departures from the assumptions of normality and equal variances required in t-tests or ANOVA, tests of means were not used. Instead, non-parametric Mann-Whitney tests of ranks distributions were performed to test the hypotheses that the PFSP groups performed better academically than controls.

Results

The results of the data analysis are presented in tables 3 - 20.

Insert Tables 3 - 20 about here

Figures 1 - 18 show graphs comparing the 1985 PFSP and 1986 PFSP groups with the control group for as many as four semesters' attendance.

Insert Figures 1 - 18 about here

1985 PFSP. A review of the tables shows that for the 1985 CD-PFSP group, three of the 18 comparisons were significant ($p < .10$) in the hypothesized direction for all four semesters observed: satisfactorily completed credits,

qualitative progress and rate of progress. Five additional comparisons were significant at $p < .10$ in the hypothesized direction for at least one semester of attendance: grade point index, semesters enrolled, retention, grades of "WU" and grades of B - A, with most of the significant differences in distributions being observed in the later semesters. Thus, almost half of the variables in the study showed at least some positive difference for the 1985 PFSP group versus the control group, although only at the $p < .10$ level.

A visual examination of figures 1 - 18 shows that in 10 of the 18 comparisons, the 1985 PFSP group performed in the expected direction as compared with the control group, five comparisons were contrary to expectations, with the remaining three comparisons showing neither group different from the other.

Finally, for the 1985 PFSP, the graphs in figures 1 - 18 show in six of the 18 an increasingly positive gap between the PFSP group and controls, for nine of the 18 no difference as a function of time, and for three of the 18, a worsening gap for the 1985 PFSP group vs. controls over time. The six variables showing increasingly positive differences between 1985 PFSP and controls were: credits

satisfactorily completed, qualitative progress, semesters enrolled, semesters completed, retention, and grades of B - A. The increasingly negative differences were for: poor grades, grades of "F" and grades of "W." Thus, there is some suggestion of change over time, even into the fourth semester of attendance, which may be attributable to the 1985 CD-PFSP program.

1986 PFSP. For the 1986 PFSP group versus controls, tables 3 - 20 show no significant differences ($p < .10$) in the hypothesized direction for any of the 18 variables. One variable, total withdrawals, was observed to differ at almost the level of significance set for this study ($p = .103$), but in the opposite direction to that hypothesized (two-tailed test). That is, for semester 1, the 1986 PFSP group had an unanticipated greater number of withdrawals than the control group.

A visual inspection of the graphs over the two semesters of observed academic performance for the 1986 PFSP group shows 10 of the comparisons in the hypothesize direction, although the differences are quite small and not statistically significant. For the most part academic performance of the 1986 PFSP group during the first two semesters' attendance appears to fall between the 1985 PFSP

group and the control group. Further observation over an additional two semesters may reveal clearer trends. Eight of the differences between the 1986 PFSP and control groups, not significant statistically, were in the direction opposite to that hypothesized.

Discussion

1985

Generally, for the 1985 PFSP group, there is much to indicate in the findings that the program has had a positive impact on student academic performance (although only at the $p < .10$ level of statistical significance, rather than at $p < .05$). Present results corroborate findings of a previous report which examined the 1985 PFSP group after two semesters' attendance (Miller, 1986a).

After four semesters, the 1985 PFSP group, on the average, had a GPI of about 0.35 of a point higher than the control group. Retention of the 1985 PFSP group was almost 71% vs. 35% for controls. The 1985 PFSP had satisfactorily completed (SCRCMPL) 8 more credits than controls after four semesters, had almost 24 more quality progress points (GPI x SCRCMPL) than controls, was enrolled 0.63 more semesters than controls and showed a rate of progress of 0.66 more

credits satisfactorily completed per semester enrolled than controls.

The reader might well ask: are the magnitudes of these outcomes in comparison to controls in the 1985 PFSP group, i.e. program effects, what one might expect from a compensatory program such as this?

A study carried out by Stupka (1986) at Sacramento City College in California (SCC), a two-year institution, provides data showing the 1985 PFSP group's academic performance relative to the control group after two semesters' attendance to be surprisingly comparable to Stupka's group of students enrolled in an extended, semester-long college orientation course called "College Success" (CS). Stukpa compared the CS students with students who had only attended a three-hour New Student Orientation (NSO) and with students who had only attended a last-minute one-hour information session (IS), these two groups serving as controls. Controls were matched with the CS group on four variables: age, gender, reading placement and writing placement. Stupka reported that the program group enrolled in the extended orientation course, when compared with the two control groups on academic performance and persistence, after two semesters' attendance:

1. Completed an average of 2.76 more credits.

2. Earned a GPI of 0.71 points higher.

3. Had a higher retention rate: 91.38% for the CS group vs. a pooled retention rate of 80.38% for the two control groups, NSO and IS, or an increase of 11 percentage points. (Stupka, 1986).

The Queensborough Community College 1985 CD-PFSP, a six-week compensatory program for high risk students, i.e. students economically and educational disadvantaged, in comparison with controls from the same special population, after two semesters' attendance:

1. Completed an average of 3.08 more credits.

2. Earned a GPI of 0.46 points higher.

3. Had a higher retention rate: 94.12% for the 1985 PFSP group vs. a retention rate of 88.24% for the control group, or an increase of 5.88 percentage points.

What is remarkable about these results is that the SCC students, drawn from the general college student population, attended their program for an entire 18-week semester as a course for 3 credits, meeting three hours per week, or about 54 hours, while the QCC 1985 PFSP students, drawn from a population of high risk community college students, attended orientation workshops and counseling for only approximately

30 hours of the non-credit six-week program, with the balance of the time devoted to basic skills development. Although the PFSP program group did not surpass the SCC orientation class group in program gains, the magnitude of program effects in the QCC 1985 PFSP program were certainly comparable, all things considered.

Some observers of the CD-PFSP programs in other colleges have mentioned that the students' initial positive gains appear to "fade," or "wash out" with time. In the Queensborough CD-PFSP program, however, program effects for the 1985 group appear, in some areas to become stronger with the passage of time, suggesting that the program taught and developed general coping skills, which, interacting with successful academic performance, found increasing reinforcement and strengthening in comparison with the control group. These areas appear to center on persistent and quality completion of course work, as well as continued enrollment (credits satisfactorily completed, qualitative progress, semesters enrolled, retention, semesters completed and grades of B - A).

Yet, a puzzling observation from the graphs is the concomitant increasing negative gap with the 1985 PFSP group showing more grades of "W," "F," and poor grades. Perhaps

the program has differential effects on different students over time, with the more conscientious and achievement oriented become stronger in this orientation and the less academically oriented students becoming less dedicated, or encountering more difficulties over time. The 1985 PFSP program seems to have had delayed positive effects for some students and delayed negative effects for others. If this is the case, understanding which student attributes interact with the program to produce such hypothesized differential effects might help program planners to match program components to student needs.

In general, the 1985 PFSP group seems to have exhibited an increasingly marked staying power: higher motivation and more effective coping with the challenges of academic study than the control group.

1986

A somewhat different picture is found for the 1986 PFSP group. Although limited by a perspective of only two semesters, the general pattern is one of non-significant results, yet in the direction predicted for many variables, even though initial program input variables did not differ significantly from the control group. If skills and previous high school performance were roughly similar, we

can only speculate that the 1986 PFSP program was not as effective in motivating and teaching positive academic coping behavior as the 1985 PFSP program. The suggestion of a greater tendency among the 1986 PFSP group to withdraw from courses than the control group may indicate a relative lack of persistence among 1986 PFSP students.

1985 vs. 1986

On the other hand, academic performance outcomes comparisons between the two program years of 1985 vs. 1986 did not reveal statistically significant differences either, when Mann-Whitney tests were performed. However, uniformly, the 1985 program group tended to perform better on almost all variables than the 1986 group, though not at a statistically significant level of difference. (The reader may wish to glance at tables 3 - 20, comparing means of the 1985 and 1986 PFSP groups.)

The greater tendency of the 1985 PFSP group to do better than controls in comparison to the lack of such findings with the 1986 PFSP group may be due to a "Hawthorne Effect" operating at the start of many new programs and services, where staff communicate more enthusiasm, are more energized and involved and transmit greater positive

expectations and interactions with program participants than in subsequent cycles of a repeating program. When novelty is introduced, we may observe another increment in program outcomes, again due to the "Hawthorne Effect." The excitement and challenge of the "new" often results in a more hopeful, positive program atmosphere, which may have been operative in the 1985 PFSP program, but not present to the same extent in the 1986 PFSP program.

1987

The 1987 program which is currently just finishing has a new direction and focus, a new director with no previous experience with the program and bringing a different approach: that of a task and project-oriented, integrated program designed to teach college coping skills through research skills development (information seeking, analysis, and synthesis, writing, etc. in the context of the basic skills learning experiences, and using the college library as its laboratory). Students are working together in small groups to do the research and writing they need to complete their project tasks. The research projects are focused on career development information and analysis, and thus career maturity is a concomitant goal. Basic skills are seen as integral handmaidens to the purposeful performance of

project tasks rather than isolated "classroom" studies lacking direct application to college survival. It will be of interest to see ho this 1987 PFSP group fares in academic performance after several semesters' attendance at the college in comparison with the control group and the earlier PFSP groups (Elkin, 1987).

IV. Predictors of 1985 PFSP Academic Outcomes After 4 Semesters

An earlier study of the 1985 PFSP after two semesters' attendance showed the Queensborough Resources and Procedures Inventory (QRPI), a measure of students' knowledge of information about the college, correlated with GPI (r = .496), with credits satisfactorily completed (r = .549), and with grades of ABS, FAB, INC or FIN (r = -.515). Career decidedness correlated with grades of ABS, FAB, INC, or FIN (r = -.499). Information seeking behavior (IS) correlated with rate of progress (r = .435, Miller, 1986b).

It was felt of interest to look at these variables again with the 1985 PFSP group now that four semesters had elapsed. Table 21 presents a selected listing of correlations between scores on college information (QRPI), information seeking behavior (IS), social connectedness to

the college, Relationship Inventory--Behavior (RI-BEHAV), gender and CUNY Reading Assessment score gains observed at the end of the six-week program with several academic performance variables.

Insert Table 21 about here.

Table 21 shows that knowledge about the college's procedures, rules, regulations and resources (QRPI) predicted GPI, number of semesters enrolled, credits satisfactorily completed and grades of FIN/FAB. Information seeking behavior (IS) predicted GPI, semesters completed, and credits satisfactorily completed. Social relationships at the college, connectedness, predicted grades of FIN/FAB. Gender predicted GPI, credits satisfactorily completed, grades of FIN/FAB and semesters enrolled. (Females tended to do better academically in the 1985 PFSP group than males.) Finally, CUNY Reading Assessment gains predicted GPI, probation semesters, academic difficulty, grades of B - A, and grades of "F".

Summarizing these findings for this very small group of 1985 PFSP program students who stayed to obtain a GPI: knowledge about the college and its resources, information

seeking behavior, social attachment to the college, being a female and improving in CUNY Reading Assessment scores during the six-week 1985 PFSP program were all, individually, predictive of academic performance in hypothesized directions four semesters later. These results suggest that the college orientation component, the reading skills component, information seeking enhancement (in career development and in the 1987 PFSP research project), and the social cohesion building approach used in all program years at Queensborough should be retained and strengthened to attain program goals of improved academic performance and retention. The fact that males in this group tended to do more poorly than females, suggests special attention needs to be given to the male students in the group, e.g. encouragement of positive academic behavior and identification with role models may be needed to address this problem area.

Naturally, the predictive study reported here is based on only one small group of students and must be replicated with other groups over the course of time. However, in spite of this limitation, it does follow one group over the course of four semesters and examines several predictors not usually looked at with this population. Further research may produce different results with different groups, yet the

task of studying the groups longitudinally and looking at various cognitive and attitudinal predictors seems to have merit. Hopefully, this line of investigation may produce some useful ideas for future program planning.

V. 1987 PFSP Gains Analyses

In addition to the regular placement testing process, during which the CUNY Assessment Tests were administered to the students at the time of their admission to the college, alternate forms of the CUNY Assessment Tests were given to the CD PFSP students at the end of each year's program, in late July or August, to those students who had been working on specific skills areas, e.g., reading, writing and mathematics.

CUNY pre-post gains scores were analyzed by the Wilcoxon ranks test of matched groups to determine whether gains within groups during the six-week program were significant. Pre-post test gains scores were then analyzed by the Mann-Whitney ranks test to see whether gains were different between program-year groups.

The results of these analyses appear in Table 22, where the only comparisons between program-year groups which

approach the $p < .10$ level of significance, two-tailed tests, of the seven comparisons made, were found in CUNY reading gains between the 1985 and 1986 groups ($p = .064$), where the gains for the 1986 group were significantly higher than those of the 1985 group, and the CUNY writing gains between the 1986 and 1987 groups ($p = .102$), where the gains for the 1987 group were significantly higher than those of the 1986 group. The remaining five comparisons showed no significant differences, suggesting that the interaction of teaching methods and students between the various program years produced no substantial differences. The data of Table 22 is shown graphically in Figure 19.

Insert Table 22 about here.

Insert Figure 19 about here.

An examination of within program-year groups gains shows that all three CD PFSP groups made significant gains in at least one area, reading. Writing showed significant gains in 1985 and 1987, but not in 1986, and mathematics

only posted significant gains in 1985, but not in 1987. In total, six out of eight areas-by-program-years (i.e., 75%) within groups comparisons were significant at $p < .05$ or better. These results indicate the short-term success of the remediation component of the CD PFSP program across three successive summers of operation.

The finding that the gains did not differ substantially among program years suggests that the teaching methods and instructors were robust enough and sufficiently adaptable to be effective with the wide range of students encountered in the CD PFSP program from year to year.

Table 23 presents within groups pre-post comparisons of scores on the California Achievement Tests: Reading (Tiegs & Clark, 1970) obtained from students in the 1987 CD PFSP. Dr. Robert Fredericks, the reading instructor, collected the data and kindly provided it to the author of this report for analysis.

Insert Table 23 about here.

Gains analyses of grade equivalent scores on vocabulary, comprehension and total score for the 1987 CD

PFSP program group show significant pre-post increases, with the largest gain observed in comprehension (1.929, p = .0006) and the smallest gain observed in vocabulary (0.529, p = .071). The total score gain was 1.207 (p = .0004). That is, in a six-week program, the 14 students enrolled in reading in the 1987 PFSP program showed roughly six months' growth in vocabulary and almost two years' growth in comprehension, with the total score reading gain approximately 14 months.

The data of Table 23 is shown graphically in Figure 20. These findings support the results observed with the CUNY reading test that the goal of improving reading skills in the PFSP population was attained within the structure of the 1987 program, as was the improvement of writing skills, as shown in the CUNY writing test.

Insert Figure 20 about here.

VI. Prediction of Academic Performance During the 1987 CD PFSP Program

Antonovsky (1979, 1987) has outlined a theory of human coping behavior, stress and health which is based upon

his concept of "sense of coherence." He defines a person's sense of coherence as being composed of three facets:

> The sense of coherence is a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement (1987, p. 19).

Although Antonovsky uses this concept and its associated theory to understand why people are able to maintain health and well-being in spite of environmental and psycho-social stress, he also believes that the sense of coherence has predictive relevance to complex task performance, such as academic performance:

> With respect to task performance, success is largely determined by the intelligence, knowledge, and skills the person brings to the task, as well as by the objective context. But, particularly when the task is ambiguous and complex, the strength of the SOC (sense of coherence) will be a contributory factor. The strong-SOC person will be motivated to see the task as a challenge, to impose structure, to search for appropriate resources. He or she will have more confidence that performance outcome will be reasonable. Thus, assuming that the task is within the boundaries of what matters to the person, it is indeed likely that there will be some contribution of the SOC to outcome (1987, p. 182).

Antonovsky developed an instrument to assess a person's standing on sense of coherence (SOC), the Life Situation

Questionnaire and reports norms, reliability and validity data for the instrument (1987). Although not intended to assess the three facets described in the definition above, i.e., comprehensibility, manageability and meaningfulness, Antonovsky does provide a key to the items associated with each of the three facets. He does, however, caution against using data on the three components, as their factor structure does not exactly follow the item subgroups keyed on the instrument.

Antonovsky (1987) reports Cronbach alpha's from .837 to .933, with a median coefficient of .881. The present author obtained coefficient alpha's with the 1987 CD PFSP program group of .864 for SOC, .584 for comprehensibility, .695 for manageability, and .766 for meaningfulness. Carlos Heredia, PFSP program counselor, administered the the Life Situation Questionnaire (LSQ) during the first week of the summer program to the 14 students enrolled in the 1987 CD PFSP program. The author scored the LSQ on not only SOC, but also on each of the three facets: comprehensibility, manageability and meaningfulness for exploratory purposes, in spite of Antonovsky's warning that "the reader is duly warned, then, that the present version of the SOC scale is not wisely used to study component interrelations. This

question remains on the agenda of unfinished business (1987, pp. 87 - 88)."

It was hypothesized that for the 1987 CD PFSP program group, keeping initial levels of CUNY skills assessments constant, post-test scores on CUNY skills (i.e., reading and writing, as only two students completed post-tests in mathematics) would be associated with initial levels of SOC and its components, especially manageability and meaningfulness.

The results of correlational analyses appear in Table 24. Partial correlations were used to control for pre-test reading scores in the computation of the correlations between initial sense of coherence scores and post-test reading scores and to control for pre-test writing scores in the computation of the correlations between sense of coherence scores and post-test writing scores.

Insert Table 24 about here.

Contrary to expectations, SOC was not related to post-test scores on either reading or writing when controlled for pre-test scores in each of these areas,

respectively. Also, although not predicted as being most involved in skills gains, comprehensibility was the only facet of SOC which was related at close to $p < .05$ in the predicted direction ($p = .046$, $N = 14$, for reading and $p = .056$ for writing, $N = 11$). Yet, reference again to Antonovsky's definition of SOC, given above, shows comprehensibility to be the "...dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable...(1987, p. 19)." Antonovsky further elaborates on his concept of comprehensibility:

> Comprehensibility is indeed the well-defined, explicit core of the original definition. It refers to the extent to which one perceives the stimuli that confront one, deriving from the internal and external environments, as making cognitive sense, as information that is ordered, consistent, structured, and clear, rather than as noise--chaotic, disordered, random, accidental, inexplicable. The person high on the sense of comprehensibility expects that stimuli he or she will encounter in the future will be predictable or, at the very least, when they do come as surprises, that they will be orderable and explicable. It is important to note that nothing is implied about the desirability of stimuli. Death, war, and failure can occur, but such a person can make sense out of them (1987, pp. 16 - 17).

Reviewing Antonovsky's elaboration on his concept of comprehensibility, we see it is clearly a cognitive, rather than affective, facet of SOC. Recalling that it was

reported earlier in this study that information seeking behavior and information concerning college rules, procedures and resources were two variable predictive of academic performance after four semesters' attendance at the college for the 1985 CD PFSP program group; it seems reasonable, then, to find gains in basic skills assessments to relate to initial levels of comprehensibility. Gathering information and having a cognitive map of the college and its bureaucracy would appear to be associated with Antonovsky's concept of comprehensibility, i.e. the ability to "make sense out of stimuli."

Comprehensibility refers to the student's capacity to view past and present and future stimuli as understandable, ordered and meaningful. This capacity was, to some extent, related to gains in basic skills when initial skill levels were controlled. It is for future research to determine the usefulness of SOC and its component facets in predicting the more "ambiguous and complex" academic performance after attending the college during the regular semester. We would expect that not only comprehensibility, but also manageability, meaningfulness and overall sense of coherence will be related to academic performance outcomes, as was found for information seeking behavior and college information (QRPI). These findings will be reported in an

addendum to this report which will be issued in February 1988, where the 1987 CD PFSP program group will be studied after one semester's attendance at the college.

VII. 1987 PFSP Academic Outcomes: One Semester

(To be included after January 31, 1988)

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Table 1

PFSP - Control Comparisons:
Program Inputs

Program Year		Age	Gender	HS Avg.	HS Units	CUNY Reading	CUNY Writing	CUNY Math.
85 PFSP								
	Mean	20.06	.2941	70.44	8.719	8.412	5.529	19.12
	SD	4.697	.4697	4.453	2.309	3.203	.8	5.195
	N = 17							
86 PFSP								
	Mean	18.21	.4286	70.83	8.571	8.714	5.571	19.86
	SD	1.051	.5136	3.59	1.869	4.445	.756	5.021
	N = 14							
87 PFSP								
	Mean	18.14	.5714	72.61	9.071	8.286	5.929	17.21
	SD	.8644	.5136	5.009	2.417	3.561	1.328	7.597
	N = 14							
Control								
	Mean	19.35	.4706	71.81	9.107	10.24	5.588	19
	SD	3.534	.5145	2.965	2.683	6.18	1.805	6.595
	N = 17							
M-W Prob.*								
	85-Cntrl	.904 n.s.	.389 n.s.	.407 n.s.	.803 n.s.	.13 n.s.	.959 n.s.	.986 n.s.
	86-Cntrl	.463 n.s.	.858 n.s.	.372 n.s.	.614 n.s.	.475 n.s.	.984 n.s.	.594 n.s.
	87-Cntrl	.621 n.s.	.649 n.s.	.619 n.s.	.909 n.s.	.197 n.s.	.677 n.s.	.2929 n.s.
Kruskal-Wallis One-Way Non-Parametric AOV Prob.*		.763 n.s.	.491 n.s.	.566 n.s.	.942 n.s.	.505 n.s.	.943 n.s.	.576 n.s.

* All Mann-Whitney ranks and Kruskal-Wallis tests are two tailed.

Table 2

PFSP - Control Comparions:
Ethnic Distribution

Ethnic Group	1985 %(N)	1986 %(N)	1987 %(N)
Nat.Amer Indian	0(0)	0(0)	7.14(1)
Asian or Pacif. Is	5.88(1)	0(0)	7.14(1)
Puerto Rican	11.76(2)	28.57(4)	7.14(1)
Other Hispanic	5.88(1)	7.14(1)	7.14(1)
Black	64.71(11)	42.86(6)	71.43(10)
White	0(0)	21.43(3)	0(0)
Prefer not respnd	11.76(2)	0(0)	0(0)
TOTALS	100(17)	100(14)	100(14)

Overall Chi Square = 16.48

P value = .1703 n.s.

d.f. = 12

Table 3

PFSP - Control Comparisons:
Grade Point Index

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	2.059	1.814	1.821	1.751
	SD	.877	.873	.887	.835
	N = 17				
86 PFSP					
	Mean	1.953	1.535		
	SD	1.092	.829		
	N = 14				
Control					
	Mean	1.527	1.346	1.381	1.401
	SD	1.059	.968	.854	.832
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	.061	.077
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP > Control.

Table 4

PFSP - Control Comparisons:
Credits Satisfactorily Completed

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	4.676	11.32	17.62	21.74
	SD	3.61	7.042	10.78	13.93
	N = 17				
86 PFSP					
	Mean	3.643	9		
	SD	3.153	7.264		
	N = 14				
Control					
	Mean	2.824	8.235	12.06	13.74
	SD	3.34	7.242	10.34	14
	N = 17				
M-W Prob.*					
	85-Contrl	.074	.074	.059	.037
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP > Control.

Table 5

PFSP - Control Comparisons:
Qualitative Progress

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	12.64	25.34	41.6	50.13
	SD	10.14	19.38	32.25	39.48
	N = 17				
86 PFSP					
	Mean	10.11	19.27		
	SD	7.698	18.39		
	N = 14				
Control					
	Mean	8.418	17.46	23.55	26.57
	SD	7.892	17.07	25.17	33.77
	N = 17				
M-W Prob.*					
	85-Contrl	.095	.079	.062	.034
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP > Control.

Table 6

Experimental - Control Comparisons:
Retention

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	No. Enrolled	17	16	12	12
	% Enrolled	100	94.12	70.59	70.59
	N = 17				
86 PFSP					
	No. Enrolled	14	10		
	% Enrolled	100	71.43		
	N = 17				
Control					
	No. Enrolled	17	15	9	6
	% Enrolled	100	88.24	52.94	35.29
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	.041
	86 Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP > Control.

Table 7

PFSP - Control Comparisons:
Semesters Enrolled

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	1	1.941	2.706	3.412
	SD	0	.2425	.6628	1.107
	N = 17				
86 PFSP					
	Mean	1	1.714		
	SD	0	.4688		
	N = 14				
Control					
	Mean	1	1.882	2.441	2.882
	SD	0	.3321	.7475	1.054
	N = 17				
M-W Prob.*					
	85-Contrl	n.s	n.s	n.s	.057
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP > Control.

Table 8

PFSP - Control Comparisons:
Rate of Progress

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	4.676	5.662	6.051	5.828
	SD	3.61	3.521	3.51	3.419
	N = 17				
86 PFSP					
	Mean	3.643	4.607		
	SD	3.153	3.558		
	N = 14				
Control					
	Mean	2.824	4.118	4.588	4.167
	SD	3.34	3.621	3.749	3.495
	N = 17				
M-W Prob.*					
	85-Contrl	.074	.074	.101	.059
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP > Control.

Table 9

PFSP - Control Comparisons:
Semesters Completed

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	.9412	1.882	2.529	3
	SD	.2425	.4851	.9265	1.447
	N = 17				
86 PFSP					
	Mean	.8571	1.571		
	SD	.3631	.6462		
	N = 14				
Control					
	Mean	.8824	1.765	2.265	2.706
	SD	.3321	.4372	.8681	1.16
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP > Control.

Table 10

PFSP - Control Comparisons:
Probation Semesters

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	.3529	.4706	.6471	.7647
	SD	.4926	.7174	.7019	.7524
	N = 17				
86 PFSP					
	Mean	.2143	.5		
	SD	.4258	.5189		
	N = 14				
Control					
	Mean	.2941	.5294	.7059	.7647
	SD	.4697	.5145	.5879	.5623
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP < Control.

Table 11

PFSP - Control Comparisons:
Dismissal Semesters

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	0	.1765	.3529	.4706
	SD	0	.393	.4926	.7174
	N = 17				
86 PFSP					
	Mean	0	0		
	SD	0	0		
	N = 14				
Control					
	Mean	0	.1176	.2353	.4118
	SD	0	.3321	.4372	.6183
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed,
with H1: PFSP < Control.

Table 12

PFSP - Control Comparisons:
Grades of "W"

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	.5294	.8235	1.294	1.588
	SD	1.068	1.074	1.047	1.064
	N = 17				
86 PFSP					
	Mean	1	1.214		
	SD	1.569	1.528		
	N = 14				
Control					
	Mean	.3529	.8824	1.118	1.176
	SD	.7859	1.219	1.364	1.468
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP < Control.

Table 13

PFSP - Control Comparisons:
Grades of "WU"

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	0	.5294	.6471	.9412
	SD	0	1.068	1.498	2.164
	N = 17				
86 PFSP					
	Mean	.3571	.5		
	SD	.9288	.8549		
	N = 14				
Control					
	Mean	.5882	.8824	1.118	1.176
	SD	1.228	1.269	1.317	1.286
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	.095	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP < Control.

Table 14

PFSP - Control Comparisons:
Withdrawals (W + WU)

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	.5294	1.353	1.706	2.529
	SD	1.068	1.412	1.263	2.528
	N = 17				
86 PFSP					
	Mean	1.357	1.714		
	SD	1.692	1.541		
	N = 14				
Control					
	Mean	.9412	1.765	2.235	2.353
	SD	1.298	1.562	1.921	1.902
	N = 17				
M-W Prob.*					
	85-Contrl	n.s	n.s.	n.s.	n.s.
	86-Contrl	.103**	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP < Control.

** Two-tailed test.

Table 15

PFSP - Control Comparisons:
Grades of B - A

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	.6471	1.353	2.412	2.471
	SD	1.115	1.579	2.808	2.401
	N = 17				
86 PFSP					
	Mean	.4286	1.071		
	SD	.5136	.9169		
	N = 14				
Control					
	Mean	.4118	.8824	1.176	1.471
	SD	.6183	1.054	1.38	1.7
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	.098	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP > Control.

Table 16

PFSP - Control Comparisons:
Grades of FIN and FAB

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	0	.1176	.2353	.2353
	SD	0	.3321	.6642	.6642
	N = 17				
86 PFSP					
	Mean	0	.2857		
	SD	0	.8254		
	N = 14				
Control					
	Mean	0	.1176	.1176	.2941
	SD	0	.3321	.3321	.4697
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP < Control.

Table 17

PFSP - Control Comparisons:
Academic Difficulties (Probation + Dismissal)

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	.3529	.6471	1	1.235
	SD	.4926	.9315	1.118	1.3
	N = 17				
86 PFSP					
	Mean	.2143	.5		
	SD	.4258	.5189		
	N = 14				
Control					
	Mean	.2941	.6471	.9412	1.176
	SD	.4697	.7019	.8269	1.015
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP < Control.

Table 18

PFSP - Control Comparisons:
Grades of "F"

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	.1765	.4118	.6471	.7647
	SD	.393	.5073	.7019	.8314
	N = 17				
86 PFSP					
	Mean	.0714	.3571		
	SD	.2673	.6333		
	N = 14				
Control					
	Mean	.1176	.2353	.4118	.4706
	SD	.3321	.4372	.5073	.6243
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP < Control.

Table 19

PFSP - Control Comparisons:
Remedial Percent "R"

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	.3338	.3363	.3131	.3344
	SD	.4176	.3875	.3805	.3712
	N = 17				
86 PFSP					
	Mean	.4583	.3331		
	SD	.4502	.4249		
	N = 14				
Control					
	Mean	.2887	.2	.285	.3594
	SD	.37	.2663	.3155	.3373
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP < Control.

Table 20

PFSP - Control Comparisons:
Poor Grades (F + WU + REMPCT R + FIN/FAB)

Program Year		Sem. 1	Sem. 2	Sem. 3	Sem. 4
85 PFSP					
	Mean	.5213	1.461	2.063	2.397
	SD	.6351	1.774	2.886	3.094
	N = 17				
86 PFSP					
	Mean	.9583	1.564		
	SD	1.529	1.933		
	N = 14				
Control					
	Mean	.822	1.133	1.785	2.172
	SD	1.07	1.012	1.14	1.359
	N = 17				
M-W Prob.*					
	85-Contrl	n.s.	n.s.	n.s.	n.s.
	86-Contrl	n.s.	n.s.		

* All Mann-Whitney ranks tests are one-tailed, with H1: PFSP < Control.

Table 21

Correlations of Selected 1985 PFSP Predictor Variables with Academic Performance Outcomes: Observations After Four Semesters

Predictor Variable	X	Academic Outcome	=	r	d.f.	Prob.
QRPI		SEMENRL		.6292	14	.009
QRPI		SCRCMPL		.5744	14	.02
QRPI		GPI		.4919	14	.053
QRPI		FINFAB		-.5531	14	.026
IS		GPI		.5169	14	.04
IS		SCRCMPL		.4631	14	.071
IS		SEMCMPL		.4584	14	.074
RI-BEHAV		FINFAB		-.6287	14	.009
GENDER		FINFAB		.6547	14	.006
GENDER		SCRCMPL		-.542	14	.03
GENDER		GPI		-.5592	14	.024
GENDER		SEMENRL		-.5906	14	.016
READING GAIN		GPI		.5701	10	.053
READING GAIN		GRADES B-A		.569	10	.054
READING GAIN		ACADIFF		-.5792	10	.048
READING GAIN		GRADES F		-.6138	10	.034
READING GAIN		PROBATION		-.6509	10	.022

Table 22

PFSP - Gains Analyses

Program Year	CUNY READING Pre	Post	Gain	CUNY WRITING Pre	Post	Gain	CUNY MATHEMATICS Pre	Post	Gain
85 PFSP									
Mean	8.083	9.5	1.417	5.529	6.353	.824	20.2	23.6	3.4
SD	3.315	4.642		.8	1.272		3.578	.8124	
N	12	12		17	17		5	5	
W Prob.*			.066			.02			.031
86 PFSP									
Mean	8.714	13.29	4.571	5.667	6.111	.444	a	a	a
SD	4.445	4.953		.707	1.269		----	----	
N	14	14		9	9		----	----	
W Prob.			.003			.25			----
87 PFSP									
Mean	8.286	11.57	3.286	5.364	6.545	1.182	23.5	24	.5
SD	3.561	5.585		.809	.934		7.778	5.657	
N	14	14		11	11		2	2	
W Prob.			.013			.022			.75 b
Mann-Whitney Prob.**									
85 - 86			.064			.419			----
86 - 87			.599			.102			----
85 - 87			.292			.495			.429

Notes:

* All Wilcoxon signed ranks tests are one-tailed tests.
** All Mann-Whitney ranks tests are two-tailed tests.

a Nine students took a special remedial course for Pre-Nursing students which did not include algebra and so did not take post-tests in mathematics.

b The sign test was used as there were too few cases for the Wilcoxon test.

Table 23

1987 CD - PFSP Gains:
California Achievement Tests:
Reading

Sub-Test	Pre	Post	Gain	Wilcoxon Prob.*
Vocabulary				
Mean**	8.543	9.071	.529	.071
SD	2.103	1.867		
N	14	14		
Comprehension				
Mean	8.229	10.16	1.929	.0006
SD	2.009	2.4		
N	14	14		
Total Score				
Mean	8.443	9.65	1.207	.0004
SD	1.672	1.834		
N	14	14		

Note:
* All Wilcoxon signed rank tests are one-tailed.
** Grade equivalents.

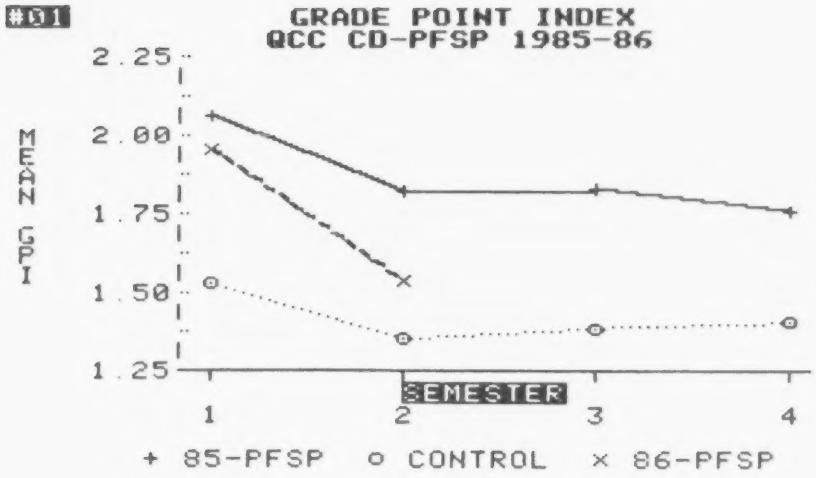
Table 24

1987 CD - PFSP:
Prediction from Sense of Coherence

Sub-Test	Post-CUNY Reading a (N=14)	Post-CUNY Writing a (N=11)
Comprehensibility	.469 (p=.046)	.53 (p=.056)
Manageability	.206	-.076
Meaningfulness	.039	.091
Sense of Coherence	.278	.219

Note:

a Post-reading scores are controlled for pre-reading scores, and post-writing scores are controlled for pre-writing scores in these partial correlations. Significance levels reported are one-tailed tests.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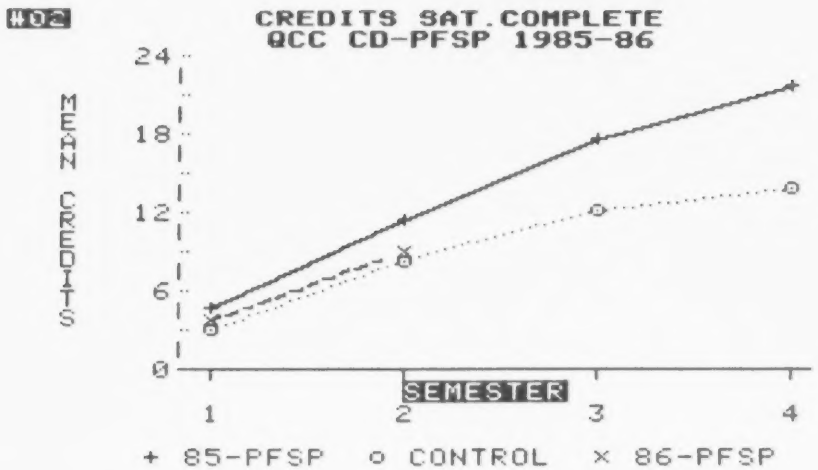
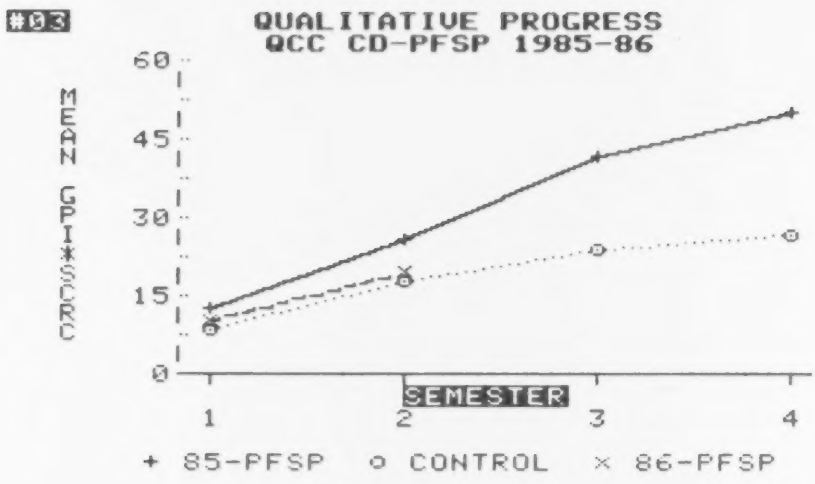
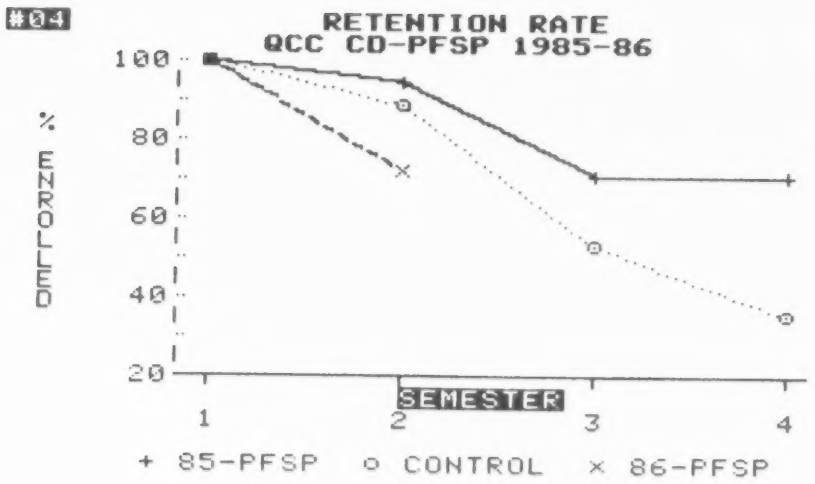
GRADE POINT INDEX
QCC CD-PFSP 1985-86
MEAN GPI
2.25
2.00
1.75
1.50
1.25
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
x 86-PFSP


#02
CREDITS SAT.COMPLETE
QCC CD-PFSP 1985-86
MEAN CREDITS
24
18
12
6
0
SEMESTER
1
2
3
4
+ 85-PFSP o CONTROL × 86-PFSP


#03
QUALITATIVE PROGRESS
QCC CD-PFSP 1985-86
MEAN GPI*SCRC
60
45
30
15
0
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP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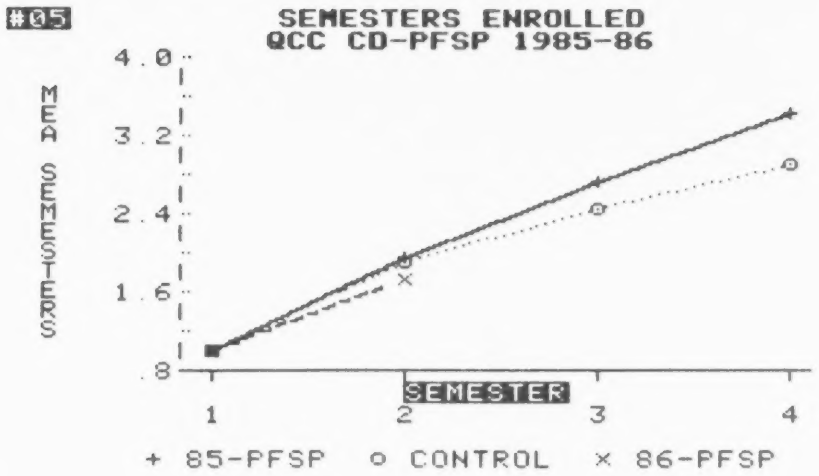
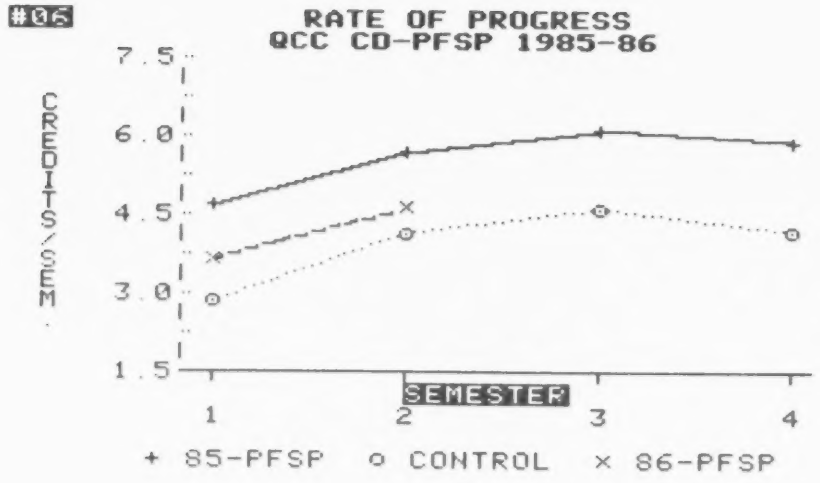
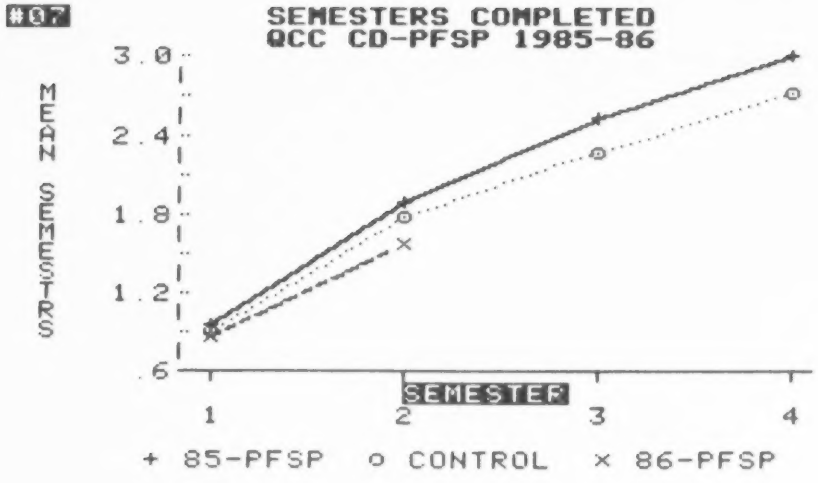
RETENTION RATE
QCC CD-PFSP 1985-86
% ENROLLED
100
80
60
40
20
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP


#05
SEMESTERS ENROLLED
QCC CD-PFSP 1985-86
MEA SEMESTERS
4.0
3.2
2.4
1.6
.8
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP


#06
RATE OF PROGRESS
QCC CD-PFSP 1985-86
CREDITS/SEM
7.5
6.0
4.5
3.0
1.5
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP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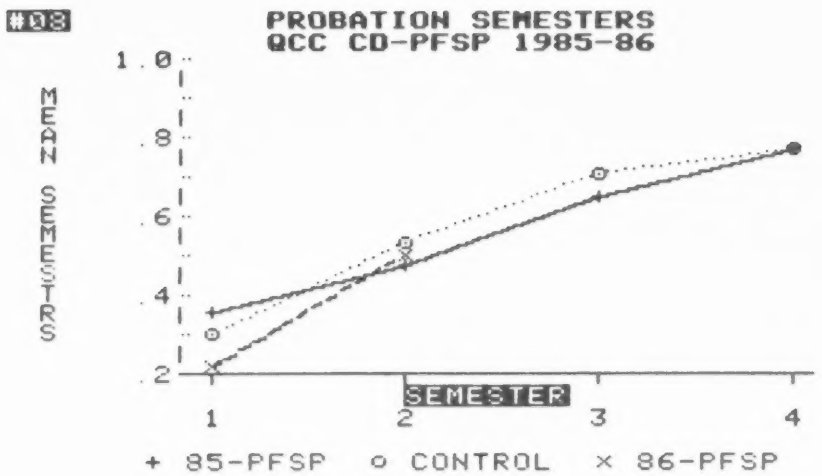
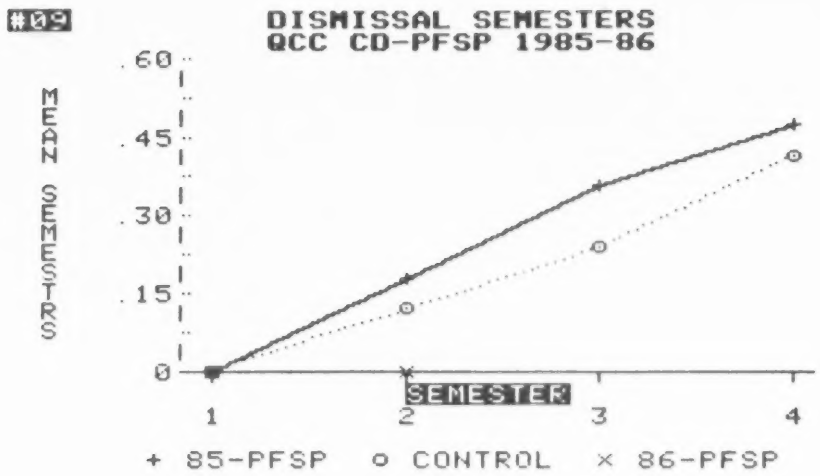
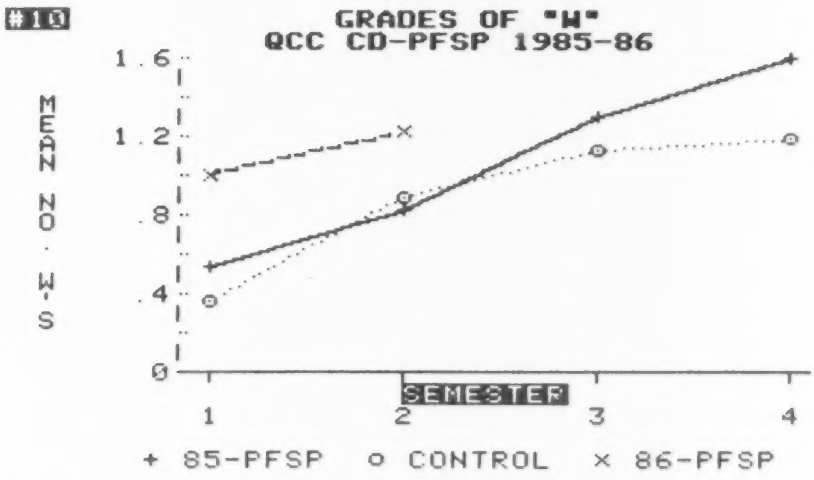
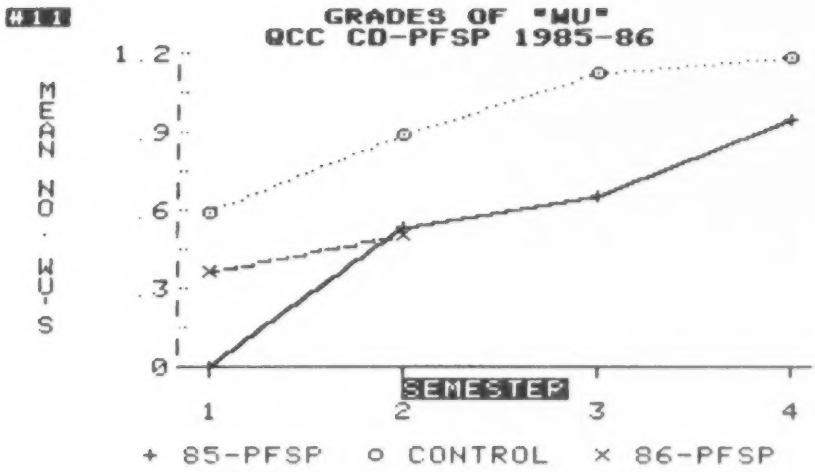
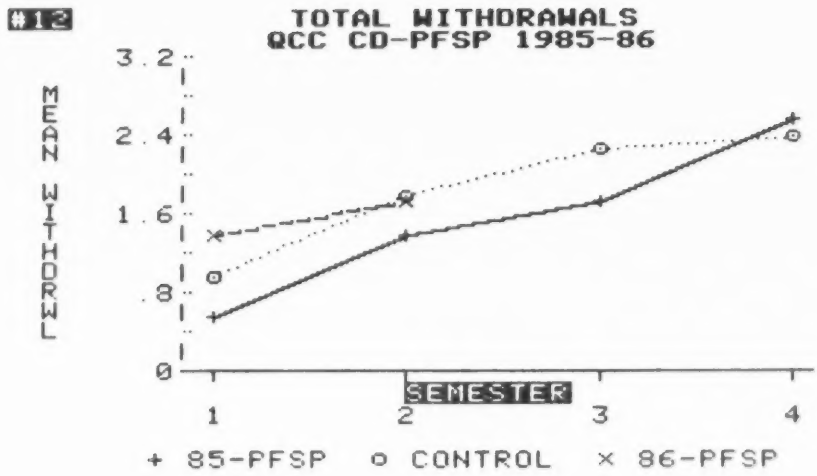
SEMESTERS COMPLETED
QCC CD-PFSP 1985-86
MEAN SEMESTRS
3.0
2.4
1.8
1.2
.6
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP

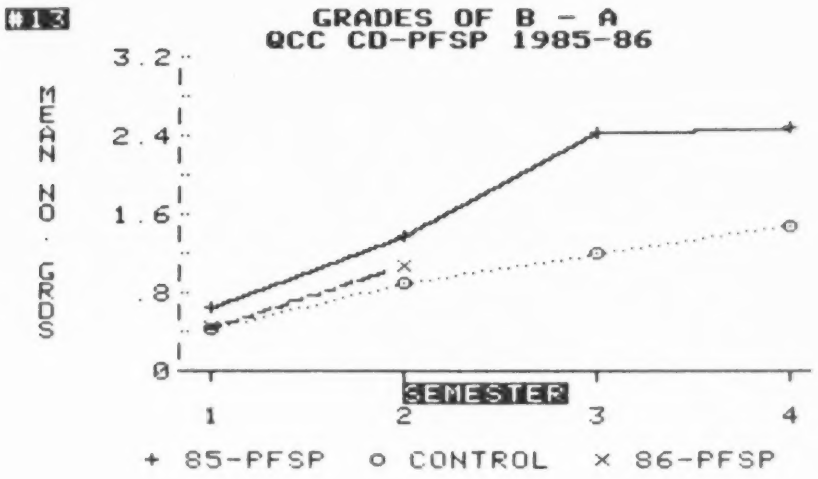

#03
PROBATION SEMESTERS
QCC CD-PFSP 1985-86
MEAN SEMESTERS
1.0
.8
.6
.4
.2
SEMESTER
1
2
3
4
+ 85-PFSP o CONTROL × 86-PFSP

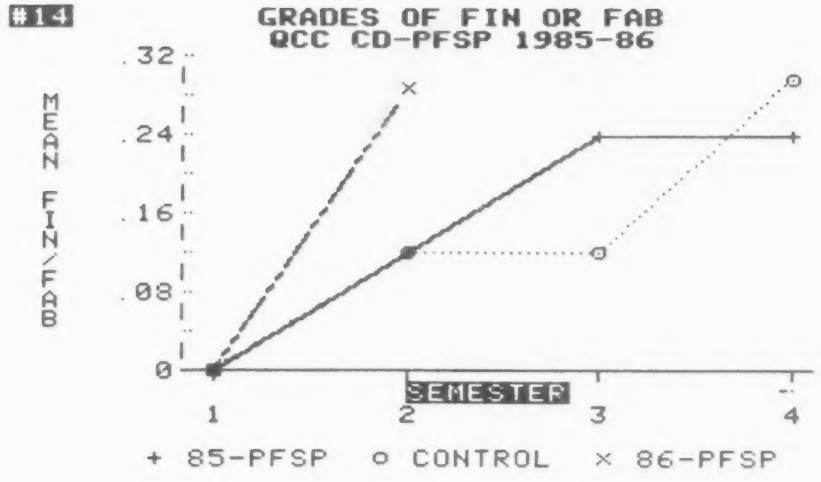

#09
DISMISSAL SEMESTERS
QCC CD-PFSP 1985-86
MEAN SEMESTERS
.60
.45
.30
.15
0
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP

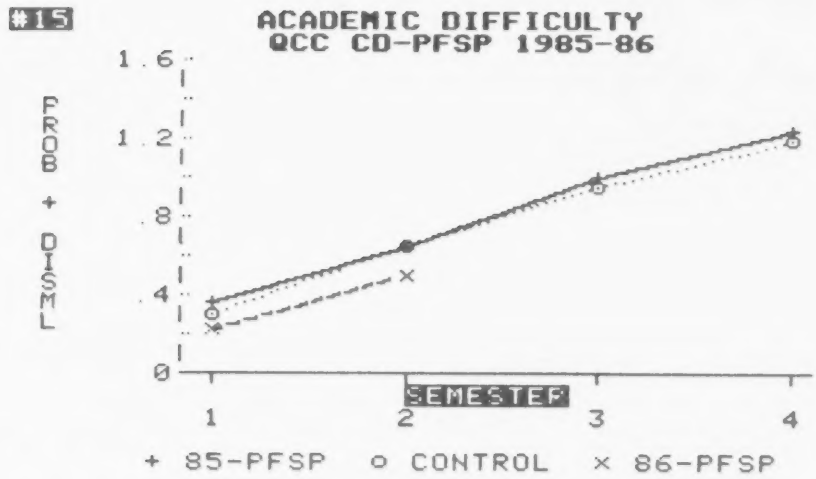

#13
GRADES OF "W"
QCC CD-PFSP 1985-86
MEAN NO. W-S
1.6
1.2
.8
.4
0
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP

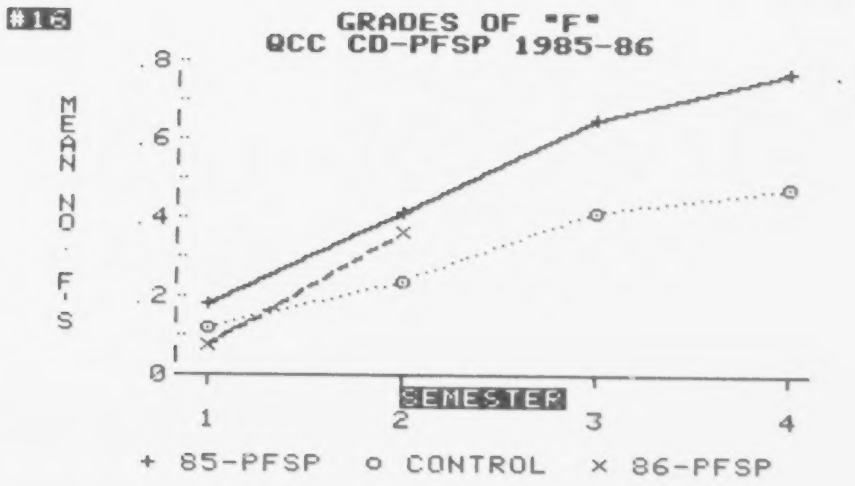

#1 1
GRADES OF "WU"
QCC CD-PFSP 1985-86
MEAN NO. WU'S
1.2
.9
.6
.3
0
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP

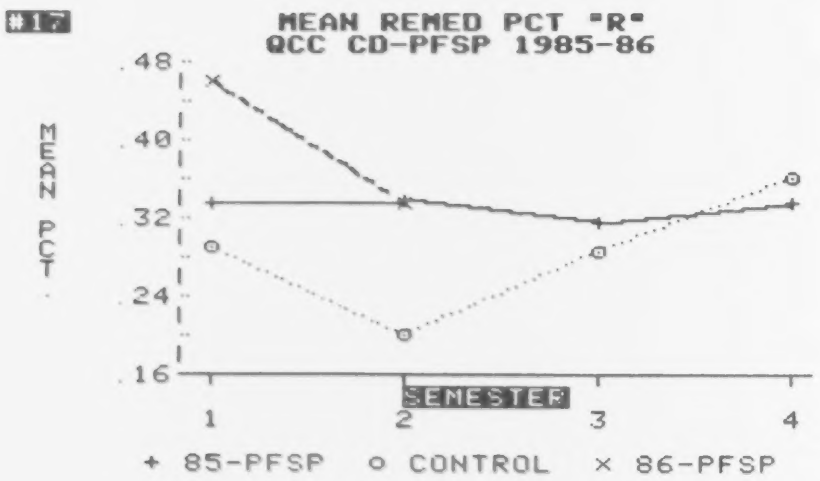

#12
TOTAL WITHDRAWALS
QCC CD-PFSP 1985-86
MEAN WITHDRWL
3.2
2.4
1.6
.8
0
SEMESTER
1
2
3
4
+ 85-PFSP o CONTROL × 86-PFSP

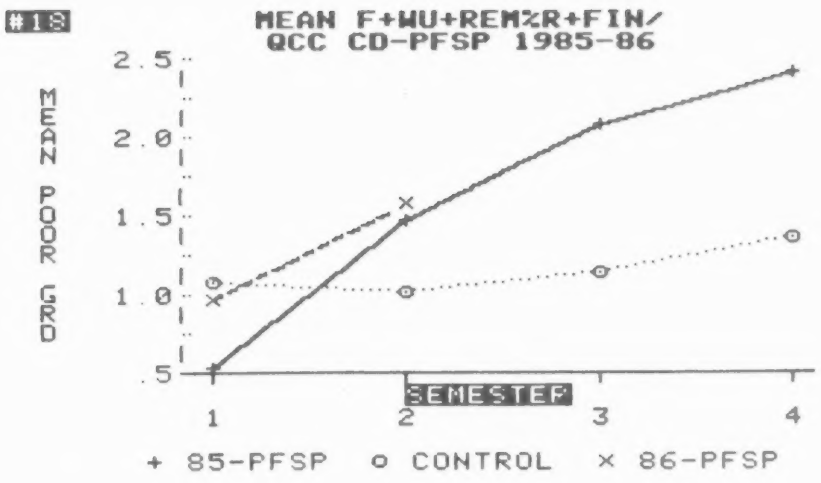

#13
GRADES OF B - A
QCC CD-PFSP 1985-86
MEAN NO. GRDS
3.2
2.4
1.6
.8
0
1
2
3
4
SEMESTER
+ 85-PFSP
o CONTROL
× 86-PFSP

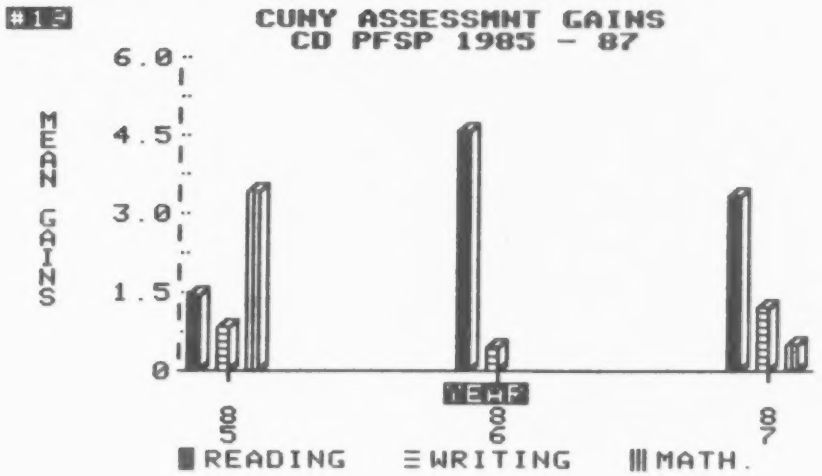

#14
GRADES OF FIN OR FAB
QCC CD-PFSP 1985-86
MEAN FIN\FAB
.32
.24
.16
.08
0
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP

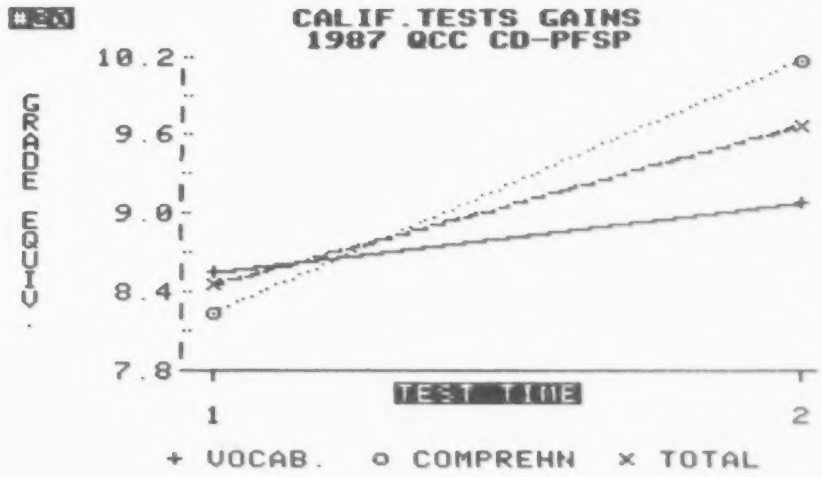

#15
ACADEMIC DIFFICULTY
QCC CD-PFSP 1985-86
PROB + DISML
1.6
1.2
.8
.4
0
SEMESTER
1
2
3
4
+ 85-PFSP o CONTROL × 86-PFSP


#16
GRADES OF "F"
QCC CD-PFSP 1985-86
MEAN NO. F.S
.8
.6
.4
.2
0
1
2
3
4
SEMESTER
+ 85-PFSP
o CONTROL
× 86-PFSP


#17
MEAN REMED PCT "R"
QCC CD-PFSP 1985-86
MEAN PCT
.48
.40
.32
.24
.16
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP


#18
MEAN F+WU+REM%R+FIN/
QCC CD-PFSP 1985-86
MEAN POOR GRD
2.5
2.0
1.5
1.0
.5
SEMESTER
1
2
3
4
+ 85-PFSP
o CONTROL
× 86-PFSP


#1
CUNY ASSESSMNT GAINS
CD PFSP 1985 - 87
MEAN GAINS
6.0
4.5
3.0
1.5
0
85
86
87
READING
WRITING
MATH.



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